

Board – CBSE

Class –6

Topic- Separation of Substances

Q.1 Multiple Choice Question

1. Husk is separated from heavier seeds of grain

- a. winnowing
- b. Hand picking
- c. sieving
- d. None of the above

2. Which of the following properties can affect dissolution of sugar in water?

- a. Quantity of Sugar
- b. Temperature
- c. Type of water
- d. Amount of sugar dissolved

3. Which technique is used to purify dirty water?

- a. Centrifugation
- b. Evaporation

c. Sedimentation

d. Decantation

4. Four mixtures are given below

(i) Kidney beans and chick peas

(ii) Pulses and rice

(iii) Rice flakes and corn

(iv) Potato wafers and biscuits

Which of these can be separated by the method of winnowing?

(a) (i) and (ii)

(b) (ii) and (iii)

(c) (i) and (iii)

(d) (iii) and (iv)

5. A solution is said to be _____ if it cannot dissolve more of the substance in it.

a. Saturated

- b. Unsaturated
- c. Homogeneous
- d. Hetrogenous

6. Statement A: A mixture of cement and pebbles can be separated by using the sieve with small pores

Statement B: A sieve with small pores will allow only small cement particles to pass through and will

hold back the pebbles

- a. Statement A is true only
- b. Statement B is true only
- c. Both are false
- d. Both are true

7. A mixture of salt and sand is given ,which of these sequence can be used to separate salt

- a. Decantation -> Filtration -> Evaporation
- b. Filtration -> Evaporation -> Condensation
- c. Filtration -> boiling ->Decantation

d. None of the above

Answer

1. A
2. b and d
3. C
4. D

5. A
6. D
7. a

Q.2 Match the column

Column I	Column II
Oil mixed in Water	Magnet
Salt mixed with water	Sieving
Iron powder mixed with flour	Handpicking
Cut potatoes mixed with French beans	Evaporation
Pebbles with rice flour	Decantation

Ans:

Column I	Column II
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Oil mixed with water	Decantation
Salt mixed with water	Evaporation
Iron powder mixed with flour	Magnet
Cut potatoes mixed with French beans	handpicking
Pebbles with rice flour	Sieving

Q.3 What is the below picture depict?

While heating the solution in a kettle, the vapour or steam starts to rise from the spout of the kettle. Then we allow this steam to come in contact with a metal plate which has some ice on it. When this happens, the steam gets converted to small drops of water which we transfer to another container. This process is called condensation.

Or

Condensation is defined as the simple process of converting gas or vapour to its liquid form by decreasing the temperature. This is what we did when we allowed the steam to come in contact with the cold metal plate.



Q.4 How will you separate husk or dirt particles from a given sample of pulses before cooking?

Ans: Husk or dirt particles can be separated by winnowing, being lighter they will fly away from pulses.

Q.5 What is Sieving? Where can it be used?

Ans. Sieving is a process by which fine particles are separated from bigger particles by using a sieve. It is used in flour mill or at construction sites. In flour mill, impurities like husks and stones are removed from wheat. Pebbles and stones are removed from sand by sieving.

Q.6 Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar ? In which case would it be possible to dissolve more sugar ?

Ans. We should add ice after dissolving sugar. When the temperature is high then more sugar can be dissolved. After mixing ice it gets cool and less sugar will dissolve in it.

Q.7 Define condensation.

Ans. The process of conversion of water vapour into liquid form is called condensation.

Q.8 How will you separate oil and water from their mixture?

Ans. Oil, being lighter than water, will float on it. Two distinct layers are formed and slowly oil is allowed to flow into another container and is separated from water. Separating funnel can also be used to separate the two.

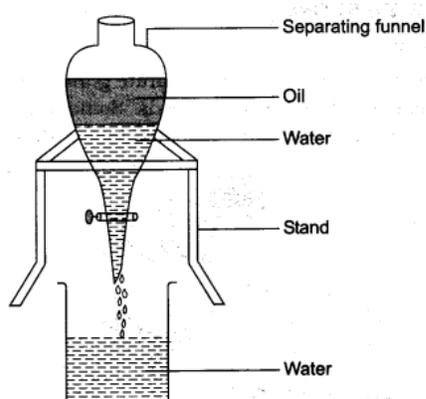


Fig. 5.13 Separation of liquids by separating funnel

Q.9 What is decantation?

Ans. Decantation is a process, of separation of insoluble solids from liquid. The suspension of solid particles in liquid is allowed to stand for some time. The solid particles then settle down at the bottom

of the container and clean water goes up. Without disturbing the settled particles the clean water is transferred into other container.

Q.10 Where is decantation used? Give two examples.

Ans.

(i) Decantation is used to separate insoluble solids or liquid from liquid. Rain water is a mixture of mud and water. It is purified by decantation.

(ii) Oil and water also get separated by this method because oil floats up.

Q.11 Explain the method that can be used for separating the following mixture:

(i) Sand and husk

(ii) Wheat, sugar and stalk (iii) Water and petrol

(iv) Rice and salt

(v) Sand and salt

Ans.(i) Mixture of sand and husk: Sand and husk can be separated by the method of winnowing.

(ii) Mixture of wheat, sugar and stalk: First, wheat will be separated from sugar and husk by sieving because they are in different sizes. Then for separating stalk from the sugar, we should

follow the winnowing method because husk is lighter than sugar and gets separated.

(iii) Mixture of water and petrol: Water does not dissolve in petrol. So, it can be separated by the use of separating funnel.

(iv) Mixture of rice and salt: Rice and salt can be separated by sieving.

(v) Mixture of sand and salt: Sand and salt is mixed with water, salt dissolves in water and sand can be separated from the solution by sedimentation and decantation followed by filtration. After that using evaporation common salt is separated.

Q. 12 What is mixture?

Ans. When two or more than two substances are mixed together in any ratio then it is called a mixture.

Q. 13 Why does visibility increase after rains?

Ans. After rains, the objects at a distance are seen more clearly, because the fine dust particles, polluted air get washed down they are responsible for low visibility and then visibility improves after rain.

Q.14 What is threshing? How is it done?

Ans. The process that is used to separate the grain from stalks is threshing. In this process, the stalks

are beaten to free the grain seeds. Sometimes, threshing is done with the help of bullocks. Machines are also used to thresh large quantities of grain.

Q. 15 Name some materials that are used as filters.

Ans. Cotton, ceramic, filter cloth, filter paper.